1:Spier E-6 (1929-1932) 1933 NT15 River Yumans NT15
Maricopa

CHAPTER II

BASIS OF SUBSISTENCE

177 241 Since the basis of subsistence of the Maricopa and their allies has changed greatly since aboriginal days it is by no means easy to draw a picture of the original food quest. Even before white settlers appeared, Maricopa acquisition of wheat from Mexico had almost entirely displaced the cultivation of corn, and since that day dependence on traders' products has almost obliterated [439] what remained of their original habits.

262 184 The staples of the Maricopa and of the Halchidhoma while still on the Colorado seem to have been identical and used in much the same proportion. There is a possibility, however, that the Halchidhoma cultivated corn somewhat more than their Gila relatives and had access to more fish. In contrast, then, they depended less on mesquite and rabbits. This must remain an inference based on what is known of other lower California peoples, since Halchidhoma informants no longer know precisely what ancestral life on the Colorado was like.

22 [243] [462] The Maricopa seem to have depended largely on gathering mesquite beans, hunting jackrabbits, and on fishing. Relatively little corn was cultivated. The picture of the food quest drawn by informants shows that women were occupied every day gathering mesquite beans during the season, while the men hunted hard by for rabbits or fished. The quest was unceasing: "people starved in those days unless men and women kept at it all day long." Kutox maintained that in those days children were [146] undernourished: "a child of two or more might not be able to stand because it lacked food." On the other hand, Bartlett (1852) makes it appear that Pima and Maricopa cultivation was so great as to allow long periods of inactivity.[1]

● 137 Yet mesquite was abundant in the valley, especially in the

[1] Bartlett, *Personal Narrative*, II, 264. [Text continues on page 50.]

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
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country included within the juncture of the Gila and Salt Rivers. Indeed, this region was so choked with mesquite and other bushes as to be nearly impenetrable. For that reason, being at the same time relatively near the Yavapai, it was dangerous territory. This was also the best region for fishing and abounded in rabbits. Fish were taken mostly in Santa Cruz slough at the northern foot of the Sierra Estrella and at the Salt-Gila confluence. From there the Maricopa drifted up the Salt fishing and gathering to a point just above Phoenix, beyond which it was not safe to go. They did not fish much in the Gila. Family parties went together, camping under the bushes. As the women went out gathering mesquite beans, men would accompany them for protection and to hunt jackrabbits. Camp was frequently shifted as the bushes were stripped clean. It was also their habit to move back and forth between the Gila and Salt to foil any lurking enemies. It was customary to include the whole family on such expeditions, although younger children were ordinarily left home in the care of friends when women went out on a day's excursion.

WILD PLANT PRODUCTS

The chief interest in wild plant products lay in the mesquite beans and giant cactus (sahuaro) fruit. Other wild plants were more casually used: the following description includes the principal but is not exhaustive.

Mesquite furnished the plant staple. Two or three varieties of the bush grew in this region: screw and straight bean mesquite, and a subvariety of the latter, differing from the common variety in its large thorns. (It is of interest that the straight bean and its bush bore separate names, iya′ and ana′l,: this was not true of the screw bean, i′i′c, nor the long thorned bean, tŏtxač′tk:) The straight bean variety was most plentiful. These bean pods were said to be softer than those growing in the old Halchidhoma country on the Colorado. Mesquite was gathered from early July to the end of August. Certain trees were known for large or sweet beans, but these were not private property. A group of women would go gathering together for fear of the enemy; several men might be within reach.

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
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horse to make decorative spots.) Both the fruit and the plant were called kălyă'p, "flat," for the flat leaf-like stems. 824

Yucca baccata grew in the desert to the north. The banana-like fruit was eaten fresh; also stored by splitting and drying. Plant and fruit were ĭtcakwa'tc. 222 [251]

Some stems and leaves of plants were eaten. A plant growing in the mountains (hence called âvi', "mountain") looked like asparagus and was bitter. The stems were roasted in ashes. A little plant, called mŭckwo', was washed and boiled. When tender this was squeezed out between the hands and eaten with salt. The leaves of âgwa'vâ, probably pigweed, larger than spinach leaves, were boiled and eaten with salt. This was gathered in the fall. 252

Mescal, the agave plant (maðĭ'l), was not much eaten because it did not grow in this locality. A few plants grew on the higher parts of the mountains to the south and more plentifully beyond in that direction. It was gathered by men because it grew too far away for the women to go. Most that they used was brought from the Papago country in cooked form. The growing plant was severed from its root by the customary chisel (n,ĭmtakĭ't or maðil,yĭmtâkĭ'tĭc, "mescal–to cut off with"). This was a stick twenty inches long, two in diameter, flattened near one end to provide a chisel edge at one side. (The chisel edge was not at the end, as with other tribes.) This was held against the base of the mescal and hammered with a convenient stone or stick. The long leaves were trimmed short with a knife; the mescal hatchet of other tribes being unknown. One leaf was left long so that the heads might be tied in pairs, or they were fastened in pairs by a stick thrust through them. A man would bring home only six or eight, not a full load, because they were scarce. 222 [137] [262] [462] [439] 222 412

The mescal heads were baked in a pit. A fire was built in it, but the usual stones omitted. The coals were raked out, the ashes sprinkled a little, the heads laid on this, covered with dirt, then ashes and a little fire. If prepared late in the morning, they were allowed to bake all the following night. The short leaves remaining on the baked head were stripped off to be chopped up and mashed in a mortar. This mass was spread to dry on peeled 252

1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
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252 sticks laid side by side or on a cloth, and when dry was rolled in a bundle. This was called mĭl,pŏk, "spread," or hama'nk, "pruned; trimmed off." The head proper was eaten without mashing. The prepared mescal could be soaked in water and [272] chewed on, or the foamy sweet liquor drunk.

Tule pollen and roots formed a most minor food. A child play- [222] ing or a hunter would pause to strip the pollen off in his hand and swallow it. Women gathered it occasionally. They broke the heads off gently so as not to shake out the light pollen, holding a basket beneath to catch the heads. Using a large pot placed on its side for protection against the wind, the heads were shaken out inside it. The pollen was poured into the basket, which was rocked from side to side to bring the chaff to the top. A sweet mush was made of this pollen mixed with a little ground wheat. [251] When they wanted to preserve it, a hole was made, sprinkled and patted, the pollen poured in layer by layer, each being sprinkled, and the whole covered with dirt. A little fire on top baked it cake-like by the next day. Sometimes the large roots of older tules were chewed. They might also be dried and ground to make a gruel. Tules are at'ăpi'l.

● [137] Sunflowers grew wild, but were not a foodstuff.

Travellers sometimes boiled the water-filled pulp of the barrel cactus (mĭltŏ't) with a little alkali.

The time when the giant cactus (sahuaro) fruit ripened, the 222 middle of June, was eagerly welcomed, not because the fruit formed any considerable portion of the dietary but as an occa- [527] sion for celebration and debauch. The plant was not common in Maricopa territory proper, growing rather on the lower hill slopes north of the Salt River. Hence the desire to collect the fruit was spiced with the dangers incident to treading so close to Yavapai country. The Yavapai themselves descended from their mountains to gather it in the same area.

The fruit is ripe when it is red at the bud end. The few long spines it bears are at this end: these were readily plucked off [419] with the fingers. The fruit was gathered with a long hook: a pole (presumably a rib of this tree-like cactus) crossed obliquely near one end by a short stick to provide both a hook and crotch to

2:Bartlett G-5 (1850-1853) 1854
NT15 River Yumans NT15

439 I told them we wanted vegetables, fruit, green
648 corn, and mules; for which we would pay them in white cotton cloth, calico, red flannel and other shirts,
[244] blankets, and trinkets. They generally raise a great many fine melons; but it was too early yet for them. They brought us green corn, squashes, beans, and
[243 dried peas. We also bought of them some dried
251] corn (maize) for the animals.

648 The culinary department, as usual, seemed to have most attractions for our Indian friends, who formed a double row around the fire while cooking was going on. They also crowded into the tents, and occupied all the space about them. When night came, we expected they would leave; but they stretched themselves out on the grass, and passed the night in the camp.

192 *June 30th.* As the heat was intense, the mercury ranging from 100° to 110°, and as we had very little shade, it was thought advisable to get nearer the river, where there were more trees, and where the men would have a better opportunity to bathe, a luxury which they had enjoyed every day since leaving Fort Yuma. The Indians told me we had better
133 remain where we were, as there was no grass near the
● 137 river. I felt disposed to listen to them; but such was the desire of the party to be on the water that I consented to go, and gave orders to strike the tents immediately after breakfast.

By eight o'clock we set off, under the guidance of Francisco, and followed by fifty or sixty more of his tribe. After crossing a deep arroyo of sand, which is filled by the river at its floods, and pushing our way

2:Bartlett G-5 (1850-1853) 1854
NT15 River Yumans NT15

through a thick underbrush of willows, we at length reached the bank of the river, when I found the statements of the Indians too true. There were many fine large cotton-wood trees, beneath which we stopped, and which afforded us a good shade from the scorching rays of the sun; but there was not a blade of grass to be seen, and, what was worse, *the Gila was dry!* We crossed and recrossed its bed without wetting the soles of our shoes; although by digging a couple of feet, we found water for ourselves and our animals.

We now turned the animals loose to browse upon the twigs of the willows and cotton-woods, as there was no other food for them; and I sent Mr. Leroux up the stream, in search of the two great desiderata for the party, grass and water, and shade if it was to be found. In three or four hours, after making a diligent search through the bottom, he returned and reported that the river was dry as far as he had followed it, and that he had met with no grass. In fact, he was told by the Indians, that we should find no grass until we passed the Pimo villages, from twelve to fifteen miles beyond. It was so hot and dry where we were, that we did not pitch our tents, having concluded to retrace our steps in the morning to our first camp at the water-holes.

The dryness of the river was produced by the water having been turned off by the Indians to irrigate their lands, for which the whole stream seemed barely sufficient. It is probable, however, that, with more economical management, it might be made to go much further.

A party of the Coco-Maricopas remained with us

3: Whited G-5 (1890) 1894 NT15 River Yumans NT 15
Maricopa
Pima NU 29

Pi 133

The Gila river has a rapid current, with a fall of from 7 to 10 feet per mile, but in many localities the banks are 10 feet in height, necessitating the erection of large stone dams in order to carry the water high enough to reach some of the best land.

Pi R 162

PIMAS ON RESERVATIONS AND MARICOPAS ON SALT RIVER RESERVATION.

DETAILS.	Pimas.	Maricopas.
Living on Gila River reservation	3,620	.....
Living on Salt River reservation	661	330
Total	4,281	330
Children under 1 year of age	220	10
Children of school age	1,040	60
Married persons in tribe	2,210	180
Wearing citizens' dress wholly	2,850	210
Wearing citizens' dress in part	1,500	100
Over 10 years of age who can read	40	.....
Under 10 years of age who can read	10	1
Under 10 years of age who can write English	10	1
Can use English enough for ordinary conversation	100	1
Received medical treatment during year	300	1
Mixed blood	12	.....
Dwellings owned by Indians	800	61
Missionaries on reservation	1	.....
Indians (criminals) punished during the year	75	.....
By court of Indian offenses	70	.....
By other methods	5	.....

Pi R 231 241 433 434 492

PRODUCTS RAISED AND STOCK OWNED BY PIMA AND MARICOPA INDIANS IN THE YEAR 1889-1890.

PRODUCTS, ETC.	Number.	Value.
Total value of products raised	.....	$87,100
Bushels of wheat	60,000	45,000
Bushels of oats and barley	16,000	12,000
Bushels of corn	1,000	700
Bushels of vegetables	3,200	2,400
Melons	25,000	1,250
Pumpkins	15,000	1,125
Tons of hay cut	250	3,750
Total value of domestic animals	.....	$1,450
Horses and mules owned by Indians	2,700	18,700
Cattle owned by Indians	1,400	17,000
Domestic fowls owned by Indians	1,000	700
Swine owned by Indians	50	250
Pounds of freight transported by Indians with their own teams	60,000	.....
Amount earned by freighting	.....	240
Value of products of Indian labor sold	.....	$8,000

Pi R 137 313

TIMBER SUPPLY ON THE GILA AND SALT RIVER RESERVATIONS.—The principal timber is the mesquite, a [illegible], scrubby tree, more or less scattered over both reservations, but growing more plentifully in the vicinity of the rivers. The wood, when dried, furnishes nearly all the fuel used by the officials and Indians.

Cottonwood grows along the rivers and irrigating ditches, and though of inferior value for fuel, yet, on account of its rapid growth and its value as a shade for irrigating ditches, protecting the water from the direct rays of the sun and thus preventing too rapid evaporation, it is an important factor in the timber supply.

Willows are plentiful near the water courses, and are utilized by the Indians in covering their huts and in fencing for corrals. The cat's claw, a thorny shrub, is extensively used by the Indians in building their rude brush fences, and it thus serves an admirable purpose.

Pi R 135

MINERAL RESOURCES.—Though the mining industry is carried on to quite an extent in various parts of the territory, producing quantities of gold, silver, and copper, it is not positively known that any deposits of

3: Whited G-5 (1890) 1894 NT15 River Yumans NT15
Maricopa
Pima NU29
Papago NU28

Pi R 58

DOMESTIC RELATIONS.—The Pimas are monogamists as well as the Maricopas, that is to say, they have but one wife at a time; at least no case of plurality of wives has come to light; but the marriage tie is not very binding, and an Indian may marry a wife and tire of her, then marry another, and so on. The deserted wife has the privilege of marrying again, provided she can find an opportunity, and if she has children the husband must take her with all the "incumbrances" and care for them. The present agent insists that the marriage ceremony shall be performed by the minister, and such marriages are considered more binding by the Indians than those by the tribal custom.

Pi R 658

SCHOOL.—A school has been maintained on this reservation for 10 years; but a few years ago the building was burned, and from that date until September, 1890, only about 20 scholars were taught by 1 teacher. It was a boarding school, supported wholly by the government. The mission church is now used as a schoolroom, the scholars boarding in the agent's dwelling. The report of the school for the fiscal year ended June 30, 1890, is as follows:

REPORT OF THE PIMA BOARDING SCHOOL, LOCATED AT SACATON, FOR THE YEAR ENDING JUNE 30, 1890.

Number of teachers (Indian, male)	1
Number of other school employés (white, female)	2
Number who have attended at one time	28
Whole number who have attended during year	36
Females	3
Males	33
Number between 6 and 18 years of age	30
Average age of pupils (years)	10
Number of months school has been maintained	7.5
Average attendance during school term	23
Largest average attendance during any month (December)	28
Salaries of teachers and employés	$1,141.50
All other expenses	344.77
Total expense of school paid by government	1,486.27

Industries taught: sewing, cooking, knitting, and laundry work.

Pi R 346

In the summer of 1890 new buildings were erected at a cost of $9,000, sufficient to accommodate 100 scholars, and a corps of 3 teachers commenced their work. The school was attended with success from the start, and in a short time the buildings were filled to overflowing and numbers of applicants were turned away for want of room.

Pa Pi R 142

PERSONAL APPEARANCE.—The copper color of the Apaches is not noticeable among the Pimas, the Maricopas or the Papagos. These latter are of a dark, swarthy complexion, resembling Mexicans, and might be mistaken for them except for the beard; indeed, some of these Indians have beards. The features of the Indian, however, differ greatly from the Mexican.

Pi R 133 137

APPEARANCE OF THE COUNTRY.—The "desert" is interspersed with short detached ranges of mountains, sometimes single mountains, or buttes, rising from a few hundred to 1,000 feet above the general level, rough and rocky, and usually of igneous origin. There is no vegetation on them with the exception of a few shrubs and several species of cactus, the giant variety predominating, which sometimes grows to the height of 25 feet and from 10 to 15 inches in diameter. Bunches of sagebush chaparral are interspersed on the desert at intervals of a few feet. Near the river the shrubby mesquite grows low and branching. Along the banks of the river and the margins of the irrigating ditches cottonwood and willows flourish. The farms of the Indians are usually inclosed with brush fences, built by setting small posts in the ground a few feet apart and filling the spaces with the thorny shrub known as cat's-claw and with the limbs of the mesquite. In passing over the usually traveled roads but few grain fields can be seen, and accounts of the amount of wheat and barley grown would seem almost incredible. Great unsightly weeds are often permitted to grow by the side of the ditches, and even to cover the fields after the crop of grain is harvested.

Pi R 417 241

REMARKS.—To learn the capabilities of the irrigated land one has but to visit that section lying on the south side of the Salt river adjoining the Salt River reservation, settled by a colony of Mormons in 1878 or 1879, now one of the most flourishing settlements in the territory. The settlers cut from three to four crops of alfalfa every year, which makes the forage crop and hay of the country. They have flourishing vineyards and peach orchards, raise figs and pomegranates, and are experimenting with oranges. Their dwellings, built of adobe or brick, look neat and comfortable, and the whole settlement wears an air of thrift and plenty. The beautiful town of Tempe, situated near the southwest corner of the reservation, seems a little Eden. Thriving farms, orchards, and gardens surround the city of Phenix.

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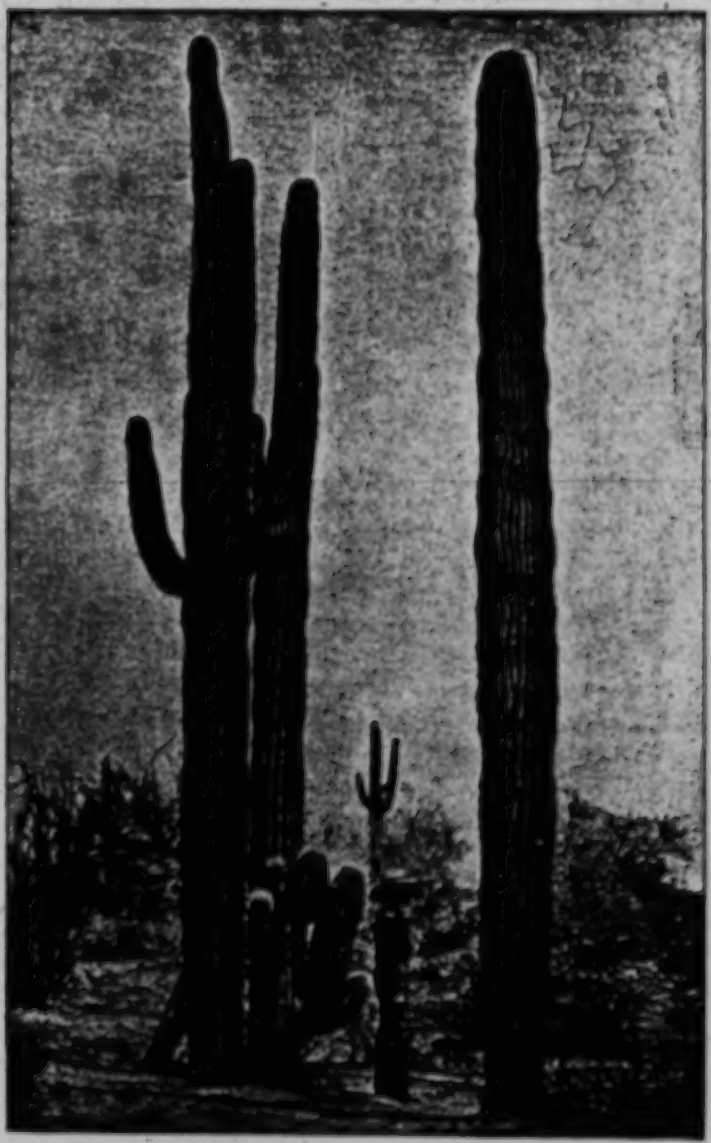
PAPAGO RESERVATION.

Pa 131

This reservation lies about 8 miles south of the city of Tucson, in Pima county, Arizona territory, the south line being the thirty-second parallel of north latitude. The area is 70,000 acres.

3: Whited G-5 (1890) 1894 NT15 River Yuman
NT15

●137



(E. A. Preston, photographer, Lawndale Park, California.)

ARIZONA.

GIANT CACTUS, (CEREUS GIGANTEUS,) ALSO CALLED SAHUARO.

[Facing page 144]